REMARKS

This responds to the Office Action mailed on May 1, 2009. Reconsideration is respectfully requested.

Claims 1, 2, 12, 16 - 18, 26 are amended, claims 25 and 28 – 30 are canceled, and no claims are added; as a result, claims 1 – 24 and 26 - 27 are now pending in this application.

Request for Form PTO-892

The Examiner cited Shah (U.S. 6,173,164) in rejection of claims in connection with this application. However, Shah (U.S. 6,173,164) is not listed on a Form PTO-892. Accordingly, Applicants respectfully request that the Examiner send a Form PTO-892 listing Shah (U.S. 6,173,164) with the next official communication.

Allowable Subject Matter

Claims 2, 5, 7, 12, 13, 18-21, 24, 26, 27 and 30 were objected to as being dependent upon a rejected base claim, but were indicated to be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 2 has been rewritten in independent form including all of the limitations of the base claim 1.

Claim 12 has been rewritten in independent form including all of the limitations of the base claim 1. Claim 13 is believed to be allowable at least because of its dependency on claim 12.

Claim 18 has rewritten in independent form including all of the limitations of the base claim 16 and intervening claim 17. Claims 19 – 21 are believed to be allowable at least because of their dependency on claim 18.

Claim 26 has rewritten in independent form including all of the limitations of the base claim 25. Claim 27 is believed to be allowable at least because of its dependency on claim 26.

Claims 28 – 30 have been cancelled.

§ 103 Rejection of the Claims

Claims 1, 3, 4, 14-17, 25, 28 and 29 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Korobkov et al. (U.S. 2003/023383) in view of Shah (U.S. 6,173,164).

Applicant's claim 1 is directed to a receiver that comprises a plurality of subchannel low-pass filters, a subchannel filter selection switch and a heterodyne frequency generator. The subchannel filter selection switch provides an analog baseband signal to a selected one of the subchannel low-pass filters. The heterodyne frequency generator provides a heterodyne frequency to convert a radio-frequency signal received within a selected subchannel to the analog baseband signal. The subchannel low-pass filters accumulate signal information from an associated one of a plurality of subchannels during a filter-input sampling interval.

Claim 1 has been amended to emphasize that the subchannel low-pass filters operate on analog baseband signals. Analog baseband signals are analog signals have not yet been digitized (e.g., by subchannel analog-to-digital converters (recited in claim 6)), nor have the signals been converted to frequency-domain signals (e.g., by an FFT).

In Korobkov's receiver 80, an analog signal is digitized by A/D 88 and converted to baseband by element 86 (see Korobkov FIG. 7). An FFT is performed on the digital baseband signal by element 90 and the frequency-domain signal is provided to each of the processing branches 92 (see Korobkov paragraph [0078] and FIG. 7). Each of the processing branches 92 of Korobkov operate on a different set of subcarriers (one set for each subchannel) because the FFT process allows the frequency components to be separated (see paragraph [0078] which states that the portion of spectrum corresponding to each subchannel is extracted by OFDM engine 92). Therefore, there would be no need for Korobkov to have a subchannel selection switch, nor would there be a reason for Korobkov to have subchannel filters prior to the FFT. Therefore, there would be no reason to combine Korobkov with any other reference that discloses subchannel filters.

Applicant's claim further distinguishes over Korobkov by reciting that the subchannel filter selection switch provides an analog baseband signal to a selected one of the subchannel low-pass filters. Note that Korobkov does not perform any switching on analog baseband signals (see FIG. 7) and that Korobkov's processing branches 92 operate on frequency-domain digital signals, not analog baseband signals.

Shah has been cited by the Examiner for disclosing subchannel low-pass filters that have a bandwidth approximately half the channel bandwidth. The combination of Korobkov and Shah, however, do not result in Applicant's claim 1, as discussed above because neither reference teaches or suggests a receiver that comprises a plurality of subchannel low-pass filters and subchannel filter selection switch that provides *an analog baseband signal to a selected one of the subchannel low-pass filters*. Applicant further submits that since Shah's filters operate on analog signals, Korobkov's FFT element and processing branches 92 (which according to the Examiner correspond to Applicant's subchannel filters) cannot provide an analog input to Shah's filters since Korobkov's FFT element and processing branches 92 operate on digital signals. Therefore the combination of Korobkov and Shah as suggested by the Examiner is inoperable.

Applicant submits that the Examiner has not provided a sufficient rational analysis to support the rejection of Applicant's claim 1 based on the combination of cited references. In view of the above, Applicant submits that claim 1 is in condition for allowance. Claim 16 has recitations similar to those of claim 1 and is therefore also believed to be in condition for allowance. The dependent claims are believed to be allowable at least because of their dependency on either claim 1 or claim 16.

Since the independent claims have been amended to include recitations from previously and currently pending dependent claims, no new issues are raised by this amendment as they have already been considered by the Examiner. Accordingly, Applicant believes that the issuance of a Final Office Action should not result from this amendment to the claims.

Claims 6, 8, 9, 10, 11, 22 and 23 were also rejected under 35 U.S.C. § 103(a) as being unpatentable over Korobkov et al. in view of Tu et al. (U.S. 2005/0144650).

Tu has been cited for disclosing subchannel analog-to-digital converters as recited in Applicant's claim 6. Although Tu discloses subchannel analog-to-digital converters, Applicant submits that the combination of Korobkov and Tu in the manner suggested by the Examiner is not possible. According to the Examiner, Tu's analog-to-digital converters would receive the output of Korobkov's processing branches 92 (which correspond to Applicant's subchannel filters). Since Korobkov's processing branches generate digital frequency-domain signals as their output, their output cannot be the input to analog-to-digital converters. Therefore, the

combination of Korobkov and Tu in the manner suggested by the Examiner is inoperable. Note that the output of Korobkov's processing branches 92 are frequency-domain signals having particular frequency components, and therefore there would be no need to perform any further filtering.

In view of the above, Applicant submits that the rejection of claims 6, 8, 9, 10, 11, 22 and 23 under 35 U.S.C. § 103(a) has been overcome and that claims 6, 8, 9, 10, 11, 22 and 23 are in condition for allowance. Applicant submits that the Examiner has not provided a sufficient rational analysis to support the rejection of Applicant's claim 6, 8, 9, 10, 11, 22 and 23 based on the combination of cited references.
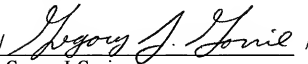
CONCLUSION

Applicant respectfully submits that the claims are in condition for allowance, and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's representative at (480) 659-3314 to facilitate prosecution of this application.

If necessary, please charge any additional fees or deficiencies, or credit any overpayments to Deposit Account No. 19-0743.

Respectfully submitted,

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